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EXAMINER	
KIM, KYUNG J	
ART UNIT	PAPER NUMBER
3664	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/587,274	BODE ET AL.	
	Examiner	Art Unit	
	KYUNG J. KIM	3664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 January 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 July 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *07/25/2006; 08/20/2009; 09/01/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This communication is a final rejection on the merits. The amendments to the claims filed January 19, 2010 have been entered. Claims 8-9, 11, 13-18 have been amended. Therefore, claims 8-18 remain pending in the application and have been considered below. The previous objections to the Specification are withdrawn in the light of the Applicant's amendments to the Specification.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 8, 10-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anuzis et al. (US 2002/0040278) in view of Kim (US 2004/0114809).

a. Regarding claim 8, Anuzis et al. discloses:

determining the current operating state of the plant (Para. [0012]-[0014], [0081]-[0083]);

acquiring process signals at definable time intervals (Para. [0081]-[0083]);

storing the process signals first in a header buffer (buffer (14, 16)) at an instant other the instant corresponding to the current operating state (Para. [0083]-[0085]);

examining the stored process signals to ascertain whether a process signal has remained within an amplitude band since it was last stored and how long ago it was last stored, wherein the examining step involves selecting the size of the amplitude to correspond to the current operating state of the plant (Para. [0083]-[0087]); and

storing the process signal as a part of a compressed signal set if it was last stored longer ago than a predefined time interval (Para. [0083]-[0087]).

However, Anuzis et al. does not expressly disclose:

applying at least one of a plurality of corresponding compression methods responsive to the current operating state to a set of process signals, wherein said applying the at least one of the plurality of compression methods comprises; and

determining the at least one of the plurality of compression methods to apply based on a result from examining the process signals to minimize a loss of data significant for the process signal.

Kim discloses:

applying at least one of a plurality of corresponding compression methods responsive to the current operating state to a set of process signals, wherein said applying the at least one of the plurality of compression methods comprises (Abstract, Para. [0030]-[0032], [0045] and [0085]-[0088]), and

determining the at least one of the plurality of compression methods to apply based on a result from examining the process signals to minimize a loss of data significant for the process signal (Abstract, Para. [0030]-[0032], [0045] and

[0085]-[0088]). Like Anuzis et al., Kim concerns compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the method of selecting a compression method of Kim to the health monitoring of Anuzis et al. in order to raise the image compression efficiency (Para. [0032]).

b. Regarding claim 10, Anuzis et al. as modified by Kim discloses all the limitations of claim 8 and further discloses:

the acquiring step further comprises acquiring the process signals simultaneously so that the set of process signals corresponds to a particular instant (Para. [0081]-[0083]).

c. Regarding claim 11, Anuzis et al. as modified by Kim discloses all the limitations of claim 8 and further discloses:

after the step of storing the set of compressed signals, determining that the operating state of the plant has changed to a second state, and applying a second compression method corresponding to the second operating state to a set of process signals, wherein the second compression method examines the process signals in accordance with an amplitude band corresponding to the second operating state of the plant (Para. [0083]-[0087]).

d. Regarding claim 12, Anuzis et al. as modified by Kim discloses all the limitations of claim 8 and further discloses:

the acquiring step further comprising selecting time intervals for acquiring process signals according to the current operating state of the plant, and acquiring process signals at definable time intervals (Para. [0083]-[0085]).

e. Regarding claim 14, Anuzis et al. as modified by Kim discloses all the limitations of claim 8 and further discloses:

wherein the corresponding compression method further comprises monitoring the process signals for violation of a limit value (Para. [0003], [0021] and [0092]).

However, Anuzis et al. does not expressly disclose:

at least one of the plurality of the corresponding compression methods.

Kim discloses:

at least one of the plurality of the corresponding compression methods (Abstract, Para. [0030]-[0032], [0045] and [0085]-[0088]). Like Anuzis et al., Kim concerns compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the method of selecting a compression method of Kim to the health monitoring of Anuzis et al. in order to raise the image compression efficiency (Para. [0032]).

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anuzis et al. as modified by Kim as applied to claims 8, 10-12 and 14 above, and further in view of Ong (US 6,177,898).

a. Regarding claim 9, Anuzis et al. as modified by Kim discloses all the limitations of claim 8 and further discloses:

acquiring process signals at definable time intervals (Para. [0081]-[0083]);

storing the process signals first in a header buffer (14, 16) at an instant other the instant corresponding to the current operating state (Para. [0083]-[0085]);

examining the process signals to ascertain whether a process signal has left a further amplitude band since it was last stored and how long ago it was last stored, wherein the examining step involves selecting the size of the further amplitude band to correspond to the current operating state of the plant (Para. [0083]-[0087]).

However, Anuzis et al. does not expressly disclose:

determining the at least one of the plurality of compression methods to apply based on a result from examining the process signals to minimize a loss of data significant for the process signal.

Kim discloses:

determining the at least one of the plurality of compression methods to apply based on a result from examining the process signals to minimize a loss of data significant for the process signal (Abstract, Para. [0030]-[0032], [0045] and

[0085]-[0088]). Like Anuzis et al., Kim concerns compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the method of selecting a compression method of Kim to the health monitoring of Anuzis et al. in order to raise the image compression efficiency (Para. [0032]).

However, Anuzis et al. as modified by Kim does not expressly disclose:

storing the process signal as a part of a compressed signal set matched to the current operating state only after it has left the further amplitude band.

Ong discloses:

storing the process signal as a part of a compressed signal set matched to the current operating state only after it has left the further amplitude band (Col. 3, lines 24-67, col. 5, lines 46-67).

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the amplitude change of Ong to the health monitoring of Anuzis et al. in order to reduce the total number of data messages required to accurately recreate the analog waveform (Col. 4, lines 8-19).

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anuzis et al. as modified by Kim as applied to claims 8, 10-12 and 14 above, and further in view of Taniguchi et al. (US 5,038,287).

a. Regarding claim 13, Anuzis et al. as modified by Kim discloses all the limitations of claim 8, but does not expressly disclose:

applying at least one of the plurality of the corresponding compression methods step further comprises after the step of acquiring process signals at definable time intervals, storing process signals whose current values are in the region of a zero point with the value zero.

Kim discloses:

at least one of the plurality of the corresponding compression methods (Abstract, Para. [0030]-[0032], [0045] and [0085]-[0088]). Like Anuzis et al., Kim concerns compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the method of selecting a compression method of Kim to the health monitoring of Anuzis et al. in order to raise the image compression efficiency (Para. [0032]).

However, Anuzis et al. as modified by Kim does not expressly disclose:

applying the corresponding compression method step further comprises after the step of acquiring process signals at definable time intervals, storing process signals whose current values are in the region of a zero point with the value zero

Taniguchi et al. discloses:

applying the corresponding compression method step further comprises after the step of acquiring process signals at definable time intervals, storing process signals whose current values are in the region of a zero point with the value zero (Col. 8, lines 43-64).

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the resetting timer of Taniguchi et al. to the health monitoring of Anuzis et al. in order to control the engine regardless of variations in the signal (Col. 3, lines 58-68, col. 4, lines 1-2).

5. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anuzis et al. as modified by Kim as applied to claims 8, 10-12 and 14 above, and further in view of Takahashi et al. (US 6,243,139).

a. Regarding claim 15, Anuzis et al. as modified by Kim discloses all the limitations of claim 8, but does not expressly disclose:

in the step of applying at least one of the plurality of the corresponding compression methods for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a high compression rate for a plant operating state in which the process signals to be stored have minimal change.

Kim discloses:

at least one of the plurality of the corresponding compression methods (Abstract, Para. [0030]-[0032], [0045] and [0085]-[0088]). Like Anuzis et al., Kim

concerns compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the method of selecting a compression method of Kim to the health monitoring of Anuzis et al. in order to raise the image compression efficiency (Para. [0032]).

However, Anuzis et al. as modified by Kim does not expressly disclose:

in the step of applying the corresponding compression method for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a high compression rate for a plant operating state in which the process signals to be stored have minimal change.

Takahashi et al. discloses:

in the step of applying the corresponding compression method for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a high compression rate for a plant operating state in which the process signals to be stored have minimal change (Col. 11, lines 19-47 and Fig. 14, where higher compression rate results in lower quality). Like Anuzis et al. Takahashi et al. concerns compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the compression method of Takahashi et al. to the

health monitoring of Anuzis et al. in order to vary the compression rate in order to preserve the quality of the data (Col. 11, lines 25-29).

b. Regarding claim 16, Anuzis et al. as modified by Kim discloses all the limitations of claim 8, but does not expressly disclose:

in the step of applying at least one of the plurality of the corresponding compression methods for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a low compression rate for a plant operating state in which the process signals to be stored have marked change.

Kim discloses:

at least one of the plurality of the corresponding compression methods (Abstract, Para. [0030]-[0032], [0045] and [0085]-[0088]). Like Anuzis et al., Kim concerns compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the method of selecting a compression method of Kim to the health monitoring of Anuzis et al. in order to raise the image compression efficiency (Para. [0032]).

However, Anuzis et al. as modified by Kim does not expressly disclose:

in the step of applying a corresponding compression method for the current operating state to a set of process signals, the applying step further

comprises applying a compression method with a low compression rate for a plant operating state in which the process signals to be stored have marked change.

Takahashi et al. discloses:

in the step of applying a corresponding compression method for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a low compression rate for a plant operating state in which the process signals to be stored have marked change (Col. 11, lines 19-47 and Fig. 14, where lower compression rate results in higher quality). Like Anuzis et al. Takahashi et al. concerns compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the compression method of Takahashi et al. to the health monitoring of Anuzis et al. in order to vary the compression rate in order to preserve the quality of the data (Col. 11, lines 25-29).

6. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anuzis et al. as modified by Kim and Takahashi et al. as applied to claims 8, 10-12 and 14-16 above, and further in further view of Ozono (US 5,203,160).

a. Regarding claim 17, Anuzis et al. as modified by Kim discloses all the limitations of claim 8, but does not expressly disclose:

the plant comprises a turbine plant having at least two operating states, a start- up phase with markedly changing process signals and a normal operating mode following the start-up phase during which the process signals have less-marked change and more constant signals than in the start-up phase, wherein the step of determining the current operating state of the plant determines the start-up operating state; and wherein in the step of applying at least one of the plurality of the corresponding compression methods for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a low compression rate for start-up phase.

Kim discloses:

at least one of the plurality of the corresponding compression methods (Abstract, Para. [0030]-[0032], [0045] and [0085]-[0088]). Like Anuzis et al., Kim concerns compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the method of selecting a compression method of Kim to the health monitoring of Anuzis et al. in order to raise the image compression efficiency (Para. [0032]).

However, Anuzis et al. as modified by Kim does not expressly disclose:

the plant comprises a turbine plant having at least two operating states, a start- up phase with markedly changing process signals and a normal operating

mode following the start-up phase during which the process signals have less-marked change and more constant signals than in the start-up phase,

the step of determining the current operating state of the plant determines the start-up operating state; and wherein in the step of applying the corresponding compression method for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a low compression rate for start-up phase.

Ozono discloses:

the plant comprises a turbine plant having at least two operating states, a start- up phase with markedly changing process signals and a normal operating mode following the start-up phase during which the process signals have less-marked change and more constant signals than in the start-up phase (Col. 2, lines 27-68, col. 3, lines 1-27, col. 7, lines 47-68, col. 8, lines 1-17, col. 11, lines 35-68, col. 12, lines 1-3 and Fig. 4).

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the start-up phase of Ozono to the health monitoring of Anuzis et al. in order to allow for the plant to be easily started up under different conditions (Col. 2, lines 27-38).

However, Anuzis et al. as modified by Kim and Ozono does not expressly disclose:

the step of determining the current operating state of the plant determines the start-up operating state; and wherein in the step of applying the

corresponding compression method for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a low compression rate for start-up phase.

Takahashi et al. discloses:

the step of determining the current operating state of the plant determines the start-up operating state; and wherein in the step of applying the corresponding compression method for the current operating state to a set of process signals, the applying step further comprises applying a compression method with a low compression rate for start-up phase (Col. 11, lines 19-47 and Fig. 14, where lower compression rate results in higher quality). Like Anuzis et al. Takahashi et al. concerns compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the compression method of Takahashi et al. to the health monitoring of Anuzis et al. in order to vary the compression rate in order to preserve the quality of the data (Col. 11, lines 25-29).

b. Regarding claim 18, Anuzis et al. as modified by Kim discloses all the limitations of claim 8, but does not expressly disclose:

the plant comprises a turbine plant having at least two operating states, a start- up phase with generally markedly changing process signals and a normal operating mode following the start-up phase during which the process signals

have less marked change and more constant signals than in the start-up phase, wherein the step of determining the current operating state of the plant step determines the normal operating state; and wherein in the step of applying at least one of the plurality of the corresponding compression methods for the current operating state normal operation to a set of process signals, the applying step further comprises applying a compression method with a high compression rate for normal operation phase.

Kim discloses:

at least one of the plurality of the corresponding compression methods (Abstract, Para. [0030]-[0032], [0045] and [0085]-[0088]). Like Anuzis et al., Kim concerns compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the method of selecting a compression method of Kim to the health monitoring of Anuzis et al. in order to raise the image compression efficiency (Para. [0032]).

However, Anuzis et al. as modified by Kim does not expressly disclose:

the plant comprises a turbine plant having at least two operating states, a start- up phase with generally markedly changing process signals and a normal operating mode following the start-up phase during which the process signals have less marked change and more constant signals than in the start-up phase,

the step of determining the current operating state of the plant step determines the normal operating state; and wherein in the step of applying the corresponding compression method for the current operating state normal operation to a set of process signals, the applying step further comprises applying a compression method with a high compression rate for normal operation phase.

Ozono discloses:

the plant comprises a turbine plant having at least two operating states, a start- up phase with generally markedly changing process signals and a normal operating mode following the start-up phase during which the process signals have less marked change and more constant signals than in the start-up phase (Col. 2, lines 27-68, col. 3, lines 1-27, col. 7, lines 47-68, col. 8, lines 1-17, col. 11, lines 35-68, col. 12, lines 1-3 and Fig. 4).

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the start-up phase of Ozono to the health monitoring of Anuzis et al. in order to allow for the plant to be easily started up under different conditions (Col. 2, lines 27-38).

However, Anuzis et al. as modified by Kim and Ozono does not expressly disclose:

the step of determining the current operating state of the plant step determines the normal operating state; and wherein in the step of applying the corresponding compression method for the current operating state normal

operation to a set of process signals, the applying step further comprises applying a compression method with a high compression rate for normal operation phase.

Takahashi et al. discloses:

the step of determining the current operating state of the plant step determines the normal operating state; and wherein in the step of applying the corresponding compression method for the current operating state normal operation to a set of process signals, the applying step further comprises applying a compression method with a high compression rate for normal operation phase (Col. 11, lines 19-47 and Fig. 14, where lower compression rate results in higher quality). Like Anuzis et al. Takahashi et al. concerns compression of data and quality of data when the data is subjected to compression.

It would have been obvious to a person having ordinary skill in the art at the time of invention to add the compression method of Takahashi et al. to the health monitoring of Anuzis et al. in order to vary the compression rate in order to preserve the quality of the data (Col. 11, lines 25-29).

Response to Arguments

7. Applicant's arguments with respect to claims 8, 9, and 13-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see attached PTO-892 form.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KYUNG J. KIM whose telephone number is (571)270-5742. The examiner can normally be reached on Monday - Friday 9:30am to 5pm with alternative Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi Tran can be reached on (571)272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KYUNG J KIM/
Examiner, Art Unit 3664
/KHOI TRAN/
Supervisory Patent Examiner, Art Unit 3664